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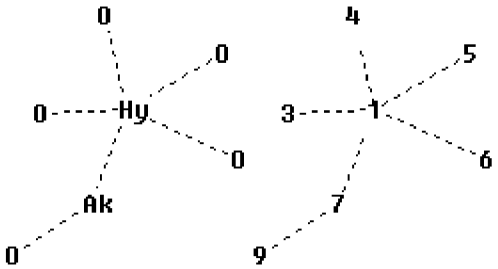

chain nodes :
1 3 4 5 6 7 9
chain bonds :
1-3 1-4 1-5 1-6 1-7 7-9
exact/norm bonds :
1-3 1-4 1-5 1-6 1-7 7-9

Connectivity :
7:2 E exact RC ring/chain
Match level :
1:Atom 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 9:CLASS
Generic attributes :
1:
Saturation : Saturated
Number of Carbon Atoms : 7 or more
Number of Hetero Atoms : Exactly 1
Type of Ring System : Polycyclic
7:
Saturation : Saturated

Element Count :
Node 1: Limited
C,C7
N,N1

L1 STRUCTURE UPLOADED

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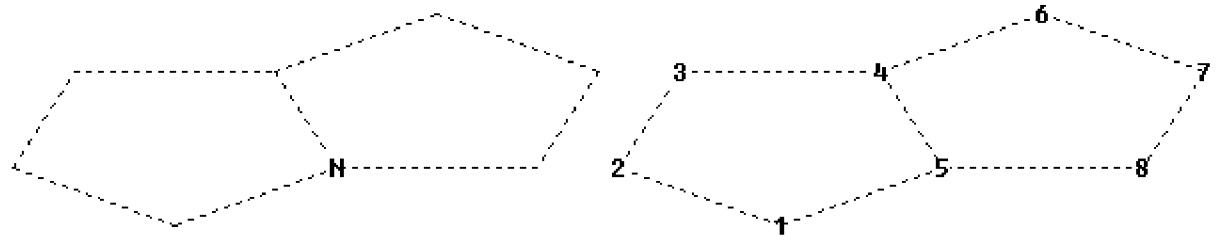

ring nodes :
1 2 3 4 5 6 7 8
ring bonds :
1-2 1-5 2-3 3-4 4-5 4-6 5-8 6-7 7-8
exact/norm bonds :
1-2 1-5 2-3 3-4 4-5 4-6 5-8 6-7 7-8

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom

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L2      STRUCTURE UPLOADED



=> d his

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L1             STRUCTURE UPLOADED
L2             STRUCTURE UPLOADED
L4         36837 S L2 SSS FULL
L5            82 S L1 SSS FULL SUB=L4

     FILE 'CAPLUS' ENTERED AT 19:14:53 ON 09 SEP 2010
L6            55 S L5
L7             1 S US200!-543014/APPS
L8             1 S L6 AND L7
L9            54 S L6 NOT L7

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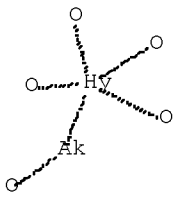


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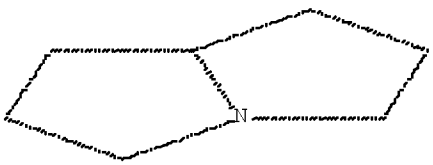


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=> fil caplus

=> d l8 bib abs

√L8   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2010 ACS on STN
IN   Watson, Alison Ann; Nash, Robert James; Evinson, Emma Louisa
PA   Molecularnature Limited, UK
     PATENT NO.          KIND   DATE        √APPLICATION NO.        DATE
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PI   WO 2004064715        A2    20040805    WO 2004-GB198          20040121
     WO 2004064715        A3    20041223
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	AU 2004206085	A1	20040805	AU 2004-206085	20040121
	CA 2513881	A1	20040805	CA 2004-2513881	20040121
	EP 1587480	A2	20051026	EP 2004-703841	20040121
	CN 1761666	A	20060419	CN 2004-80007408	20040121
	JP 2006515357	T	20060525	JP 2006-500223	20040121
	NZ 541839	A	20090228	NZ 2004-541839	20040121
	IN 2005DN03195	A	20070413	IN 2005-DN3195	20050719
	US 20070155814	A1	20070705	US 2006-543014	20060815 <--
PRAI	GB 2003-1554	A	20030123		
	WO 2004-GB198	A	20040121		

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√L9 ANSWER 1 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA Summit Corporation PLC, UK

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2010049678	A2	20100506	WO 2009-GB2554	√20091027
	WO 2010049678	A3	20100826		
PRAI	GB 2008-19941	A	20081031		
	GB 2009-6161	A	20090409		
	GB 2009-8702	A	20090520		
	GB 2009-14471	A	20090819		

√L9 ANSWER 2 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Chemical Communications (Cambridge, United Kingdom) (2010), 46(15),

√L9 ANSWER 3 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA Summit Corporation Plc., UK; Tinsley, Jonathan Mark; Roach, Alan Geoffrey

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2010029313	A1	20100318	WO 2009-GB2190	√20090910
PRAI	GB 2008-16600	A	20080911		
	GB 2008-16602	A	20080911		
	GB 2008-19528	A	20081024		
	GB 2008-19533	A	20081024		
	GB 2009-6206	A	20090409		
	GB 2009-6209	A	20090409		
	GB 2009-8677	A	20090520		
	GB 2009-8697	A	20090520		
	GB 2009-14473	A	20090819		
	GB 2009-14474	A	20090819		

√L9 ANSWER 4 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA Summit Corporation PLC, UK

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2010015815	A2	20100211	WO 2009-GB1917	√20090804
	WO 2010015815	A3	20100826		
PRAI	GB 2008-14216	A	20080805		
	GB 2008-17437	A	20080924		
	GB 2008-19518	A	20081024		
	GB 2009-6210	A	20090409		
	GB 2009-8672	A	20090520		

√L9 ANSWER 5 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA Summit Corporation PLC, UK

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2010015816	A2	20100211	WO 2009-GB1918	√20090804
	WO 2010015816	A3	20100826		
PRAI	GB 2008-14322	A	20080806		
	GB 2008-17446	A	20080924		
	GB 2008-17859	A	20081001		
	GB 2008-19523	A	20081024		
	GB 2008-19543	A	20081024		
	GB 2009-6175	A	20090409		
	GB 2009-6179	A	20090409		
	GB 2009-8661	A	20090520		
	GB 2009-8666	A	20090520		

√L9 ANSWER 6 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Journal of Organic Chemistry (2010), 75(3), 815-824

√L9 ANSWER 7 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Journal of Natural Products (2009), 72(11), 2058-2060

√L9 ANSWER 8 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA Biomatrica, Inc., USA

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2009038853	A2	20090326	WO 2008-US68628	20080627
	WO 2009038853	A3	20091015		
	US 20080176209	A1	20080724	US 2007-876667	20071022
	EP 2074210	A2	20090701	EP 2008-832322	20080627
PRAI	US 2007-947275P	P	√20070629		
	US 2007-876667	A	20071022		
	US 2004-560829P	P	20040408		
	US 2005-102588	A2	20050408		
	US 2005-291267	A2	20051201		
	WO 2006-US45661	A2	20061129		
	WO 2008-US68628	W	20080627		

√L9 ANSWER 9 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Chemistry--A European Journal (2009), 15(7), 1627-1636

√L9 ANSWER 10 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

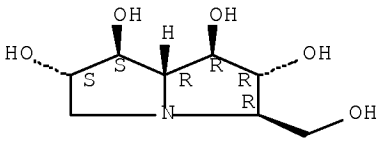
PA Biomatrica, Inc., USA

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20080268514	A1	20081030	US 2008-108360	20080423
	AU 2008275508	A1	20090115	AU 2008-275508	20080423
	CA 2684959	A1	20090115	CA 2008-2684959	20080423
	WO 2009009210	A2	20090115	WO 2008-US61332	20080423
	WO 2009009210	A3	20090924		
	EP 2118264	A2	20091118	EP 2008-826300	20080423
	KR 2010015889	A	20100212	KR 2009-722292	20080423

	JP 2010524505	T	20100722	JP 2010-506462	20080423
	IN 2009CN06415	A	20100611	IN 2009-CN6415	20091029
	CN 101688170	A	20100331	CN 2008-80021555	20091223
PRAI	US 2007-913781P	P	√20070424		
	WO 2008-US61332	W	20080423		

√L9 ANSWER 11 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Chemistry in Australia (2008), 75(8), 13-14

L9 ANSWER 12 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO e-EROS Encyclopedia of Reagents for Organic Synthesis (2001), No pp. given
RN 159440-57-0 CAPLUS
CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



√L9 ANSWER 13 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
PA Biomatrica, Inc., USA

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PI	US 20080176209	A1	20080724	US 2007-876667	20071022
	US 20050276728	A1	20051215	US 2005-102588	20050408
	US 20060099567	A1	20060511	US 2005-291267	20051201
	WO 2007075253	A2	20070705	WO 2006-US45661	20061129
	WO 2007075253	A3	20080103		
	WO 2009038853	A2	20090326	WO 2008-US68628	20080627
	WO 2009038853	A3	20091015		
	EP 2074210	A2	20090701	EP 2008-832322	20080627
	US 20080307117	A1	20081211	US 2008-182926	20080730
PRAI	US 2004-560829P	P	√20040408		
	US 2005-102588	A2	20050408		
	US 2005-291267	A2	20051201		
	WO 2006-US45661	A2	20061129		
	US 2007-947275P	P	20070629		
	WO 2005-US12084	A2	20050408		
	US 2007-876667	A	20071022		
	WO 2008-US68628	W	20080627		

√L9 ANSWER 14 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Organic Letters (2008), 10(13), 2769-2771

√L9 ANSWER 15 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Tetrahedron (2008), 64(21), 4868-4879

√L9 ANSWER 16 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Chemistry--A European Journal (2008), 14(10), 3072-3077

√L9 ANSWER 17 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
PA Institute of Chemistry, Chinese Academy of Sciences, Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 18pp.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 101153040	A	√20080402	CN 2006-10113357	20060925
	CN 100567298	C	20091209		
PRAI	CN 2006-10113357		20060925		

√L9 ANSWER 18 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Natural Product Communications (2008), 3(1), 41-44

√L9 ANSWER 19 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Natural Product Communications (2008), 3(1), 31-33

√L9 ANSWER 20 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Natural Product Reports (2008), 25(1), 139-165

√L9 ANSWER 21 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
PA Summit Corporation PLC, UK

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2008009894	A2	20080124	WO 2007-GB2597	√20070712
	WO 2008009894	A3	20080619		
PRAI	GB 2006-14098	A	20060715		

√L9 ANSWER 22 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Journal of Natural Products (2007), 70(6), 993-997

√L9 ANSWER 23 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Science of Synthesis (2006), 20b, 1065-1089

√L9 ANSWER 24 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Tetrahedron: Asymmetry (2006), 17(18), 2702-2712

√L9 ANSWER 25 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
PA MNL Pharma Limited, UK

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006077427	A2	20060727	WO 2006-GB209	√20060120

	WO 2006077427	A3	20060914
PRAI	GB 2005-1352	A	20050121

√L9 ANSWER 26 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Journal of Carbohydrate Chemistry (2006), 25(2-3), 281-295

√L9 ANSWER 27 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA MNL Pharma Limited, UK

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006067419	A2	20060629	WO 2005-GB4945	√20051220
	WO 2006067419	A3	20070329		
PRAI	GB 2004-27882	A	20041221		

√L9 ANSWER 28 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA Biomatrica, Inc., USA

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20060099567	A1	20060511	US 2005-291267	20051201
	WO 2005113147	A2	20051201	WO 2005-US12084	20050408
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	AU 2006330034	A1	20070705	AU 2006-330034	20061129
	CA 2632203	A1	20070705	CA 2006-2632203	20061129
	WO 2007075253	A2	20070705	WO 2006-US45661	20061129
	WO 2007075253	A3	20080103		
	EP 1951868	A2	20080806	EP 2006-848927	20061129
	JP 2009517086	T	20090430	JP 2008-543416	20061129
	US 20080176209	A1	20080724	US 2007-876667	20071022
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	IN 2008DN05146	A	20080808	IN 2008-DN5146	20080616
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	US 20080307117	A1	20081211	US 2008-182926	20080730
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	WO 2006-US45661	W	20061129		
	US 2007-947275P	P	20070629		

√L9 ANSWER 29 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Acta Crystallographica, Section E: Structure Reports Online (2006), E62(3), o928-o930

√L9 ANSWER 30 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA MNL Pharma Limited, UK

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 2006008493	A1	20060126	WO 2005-GB2800	√20050718
PRAI	GB 2004-16419	A	20040723		
	GB 2004-27926	A	20041221		

L9 ANSWER 31 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA M N L Pharma Limited, UK

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005070418	A1	20050804	WO 2005-GB215	20050121
	AU 2005205962	A1	20050804	AU 2005-205962	20050121
	AU 2005205962	B2	20100812		
	CA 2553854	A1	20050804	CA 2005-2553854	20050121
	EP 1711176	A1	20061018	EP 2005-701978	20050121
	JP 2007518785	T	20070712	JP 2006-550281	20050121
	US 20090117083	A1	20090507	US 2008-597290	20081230
PRAI	GB 2004-1238	A	√20040121		
	WO 2005-GB215	W	20050121		

L9 ANSWER 32 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

PA M N L Pharma Limited, UK

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005070415	A1	20050804	WO 2005-GB228	20050121
	AU 2005205968	A1	20050804	AU 2005-205968	20050121
	AU 2005205968	B2	20100729		
	CA 2553986	A1	20050804	CA 2005-2553986	20050121
	EP 1711174	A1	20061018	EP 2005-701990	20050121
	EP 1711174	B1	20080319		
	AT 389397	T	20080415	AT 2005-701990	20050121
	US 20090047306	A1	20090219	US 2008-597296	20081007
PRAI	GB 2004-1239	A	20040121		
	WO 2005-GB228	W	20050121		

√L9 ANSWER 33 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Tetrahedron (2005), 61(27), 6527-6533

L9 ANSWER 34 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

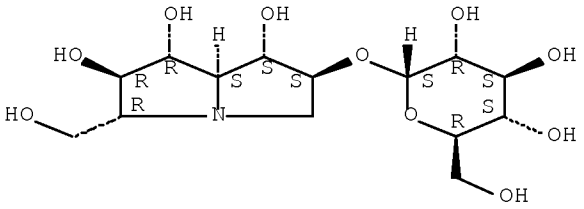
PA Japan

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005132837	A	20050526	JP 2004-296845	20041008
PRAI	JP 2003-350926	A	20031009		

AB The agents contain metal conjugates of the alkaloids I as α-glucosidase inhibitors. The agents are manufactured by soaking barks of Syzygium malaccense in MeOH, concentrating the MeOH under a vacuum, partitioning the concentrated residue between EtOAc and H2O, partitioning the aqueous layer between H2O and BuOH, and recovering solid content (called unpurified kavika) from the aqueous layer. Thus, casuarine 6-O-α-glucoside, purified from unpurified kavika, was treated with (AcO)2Zn and the mixture inhibited α-glucosidase at IC50 value 5.7 μg/mL. Oral administration of unpurified kavika to streptozotocin-induced or spontaneously diabetic rats suppressed increase in blood sugar after sucrose loading. Unpurified kavika had no acute toxicity.

RN 186795-20-0 CAPLUS

CN α-D-Glucopyranoside, (1S,2S,5R,6R,7R,7aS)-hexahydro-1,6,7-trihydroxy-5-(hydroxymethyl)-1H-pyrrolizin-2-yl (CA INDEX NAME)



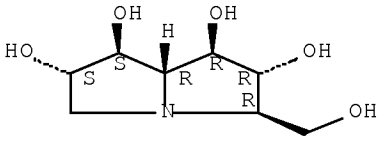
√L9 ANSWER 35 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Tetrahedron: Asymmetry (2004), 15(22), 3635-3642

√AB The reaction of N-benzyloxycarbonyl-L-prolinal (I) with (methoxycarbonylmethylene)triphenylphosphorane in CH2Cl2 afforded Me (E)-3-[(2'S)-N-benzyloxycarbonylpyrrolidin-2'-yl]propenoate (II). When the reaction was performed in MeOH, an appreciable amount of the (Z)-isomer was obtained. Both isomers were dihydroxylated to the corresponding 2,3-dihydroxy esters. The stereochem. of the latter compds. could be determined after their transformations into the corresponding 1,2-dihydroxypyrrolizidin-3-ones, e.g. III. Finally, the 1,2-dihydroxypyrrolizidin-3-ones, e.g. III, were reduced to the related pyrrolizidines, e.g. IV.

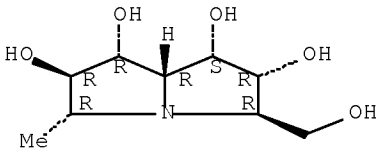
RN 159440-57-0 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



RN 240117-30-0 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-5-methyl-, (1S,2R,3R,5R,6R,7R,7aR)-rel-(+)- (CA INDEX NAME)



√L9 ANSWER 36 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Acta Crystallographica, Section E: Structure Reports Online (2004),

√AB The title compound [systematic name: (1R,2R,3S,6S,7S,7aR)-3-hydroxymethyl-1,2,6,7-tetrahydroxypyrrolizidine monohydrate or (2S,3R,4R,5R,6S,7S)-2-hydroxymethyl-1- azabicyclo[3.3.0]octan-3,4,6,7-tetrol monohydrate] was formed in a synthetic sequence in which there were several ambiguities in the stereochem. of the reactions. Its crystal structure was determined to resolve these ambiguities. Crystals are tetragonal, space group P41212, with a 7.6230(2), c 33.8174(10) Å; Z = 8, dc = 1.509; R = 0.047, Rw(F2) = 0.072 for 1372 reflections. The structure consists of 3-dimensional H-bonded network.

√L9 ANSWER 37 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

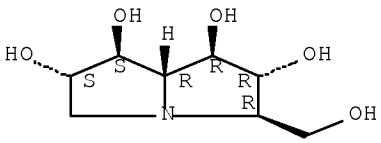
SO (2003) 459 pp. Avail.: UMI, Order No. DA3091526

√IT 159440-57-0P, (+)-Casuarine

RL: MSC (Miscellaneous); SPN (Synthetic preparation); PREP (Preparation)
(asym. induction in heteroatom-substituted aldehydes and total synthesis of (+)-casuarine)

RN 159440-57-0 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)

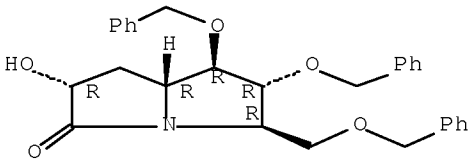


√L9 ANSWER 38 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Tetrahedron Letters (2003), 44(11), 2315-2318

RN 537030-25-4 CAPLUS

CN 3H-Pyrrolizin-3-one, hexahydro-2-hydroxy-6,7-bis(phenylmethoxy)-5-[(phenylmethoxy)methyl]-, (2R,5R,6R,7R,7aR)- (CA INDEX NAME)



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√L9 ANSWER 39 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Tetrahedron: Asymmetry (2003), 14(3), 325-331
CODEN: TASYE3; ISSN: 0957-4166

PB Elsevier Science Ltd.

DT Journal

LA English

√AB The first polyhydroxylated pyrrolizidine alkaloid with a hydroxymethyl group at C-3 was isolated from pods of Alexa leiopetala (Leguminosae) and designated alexine 1. The Australian legume Castanospermum australe is also known to produce the same structural type of pyrrolizidines. There are reports of the isolation of australine (7α-epi-alexine) 2, 1-epi-australine 3, 3-epi-australine 4, and 7-epi-australine 5 from this plant to date. Their unambiguous syntheses established that the natural product reported as 5 is 2 and the published NMR data for 2 are those of 3. These confusions prompted us to unambiguously confirm the structures and biol. activities of australine isomers and related alkaloids. A careful search for polyhydroxylated pyrrolizidines in seeds of C. australe led to the discovery of three new alkaloids, 2,3-diepi-australine 6, 2,3,7-triepi-australine 7, and the 2-O-β-D-glucopyranoside of 3 (8). Herein, we report the full 13C NMR assignment of alkaloids 1-8 and the glycosidase inhibitory activities of alkaloids 1-8 together with the highly oxygenated pyrrolizidine, casuarine 9, and its 6-O-α-D-glucopyranoside 10.

√L9 ANSWER 40 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Synlett (2003), (1), 35-38

√AB Synthesis of (-)-codonopsinine (I) was accomplished in seven steps that involved an addition of five-membered cyclic nitrone II readily obtained from L-xylose, with the Grignard reagent. Nitrone II also underwent intermol. cycloaddn. with several α,β-unsatd. esters to afford cycloadducts, one of which, III, was elaborated to the key intermediate IV for (+)-hyacinthacines A1 and A2.

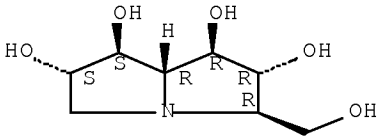
L9 ANSWER 41 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Food Style 21 (2001), 5(2), 69-73

AB A review with refs. on the physiol. effect of nangapiry (Eugenia) which is used in Paraguayan health beverage, covering its blood glucose-inhibitory effect, α-glucosidase-inhibitory effect, and blood pressure-lowering effect, etc. The active components in nangapiry, i.e. uniflorine A, uniflorine B, and (+)-(3α,4α,5β)-1-methylpiperidine-3,4,5- triol are also disclosed.

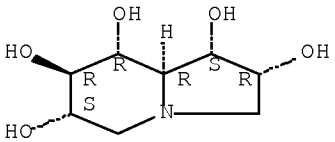
RN 159440-57-0 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



RN 260247-75-4 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6R,7S,7aR)- (CA INDEX NAME)

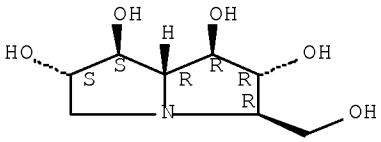


L9 ANSWER 42 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

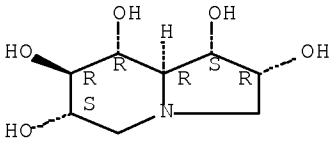
AB The water-soluble extract from a Paraguayan natural product, Nangapiry (the leaves of E. uniflora (Myrtaceae)), which has been used as an antidiabetic, showed inhibitory activities on the increase of plasma glucose levels in the sucrose tolerance test (STT) in mice. The fraction adsorbed on a cation exchange resin also inhibited α-glucosidases. From the active fraction, 2 new active compds., uniflorine A (I) and B (II) and the known (+)-(3α,5β)-1-methylpiperidine-3,4,5-triol were isolated. The structures of I and II were determined as (-)-(1S,2R,6S,7R,8R,8aR)-1,2,6,7,8-pentahydroxyindolizidine and (+)-(1S,2R,5R,7R,8S,8aS)-1,2,5,7,8-pentahydroxyindolizidine by spectral means, resp.

RN 159440-57-0 CAPLUS

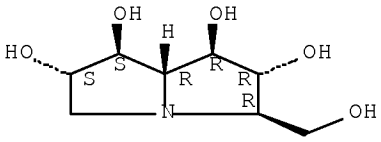
CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



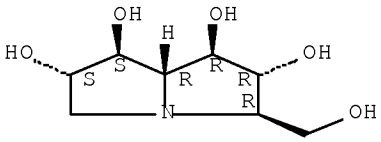
RN 260247-75-4 CAPLUS
CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6R,7S,7aR)- (CA INDEX NAME)



√L9 ANSWER 43 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO (2000) 217 pp. Avail.: UMI, Order No. DA9955629
√IT 159440-57-0P, (+)-Casuarine
RL: SPN (Synthetic preparation); PREP (Preparation)
(total synthesis of (-)-detoxinine and (+)-casuarine using tandem [4+2]/[3+2] nitroalkene cycloaddns. and cycloaddns. of nitroethylene)
RN 159440-57-0 CAPLUS
CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



√L9 ANSWER 44 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Analyst (Cambridge, United Kingdom) (2000), 125(8), 1409-1414
√AB Atmospheric pressure chemical ionization (APCI) and electrospray (ES) are compared as ion sources in the anal. of polyhydroxyalkaloids (PHAs) by liquid chromatog. mass spectrometry (LC-MS) and collision induced dissociation (CID) product ion spectra, from tandem mass spectrometry (MS-MS) expts. in a quadrupole ion trap, are reported for 12 naturally occurring PHAs. APCI was found to be a more useful source than ES, as APCI could be used to generate deprotonated mol. ions in neg. mode and for some isomeric PHAs the neg. CID product ion spectra were more diagnostic than the pos. product ion spectra. On-column detection limits were also approx. 32 times lower by pos. APCI than ES. The work provides data that will facilitate screening and characterization of this group of important natural products in plant and fungal exts.
RN 159440-57-0 CAPLUS
CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



√L9 ANSWER 45 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Journal of Organic Chemistry (2000), 65(10), 2875-2886

AB The first synthesis of (+)-casuarine (I), a pentahydroxy pyrrolizidine alkaloid of the alexine/australine subclass, is described. The key step is a tandem [4 + 2]/[3 + 2] nitroalkene cycloaddn. involving nitrobenzoate (E-O2NCH:CHOBz), chiral vinyl ether II, and vinyl silane III (TDS = SiMe2CMe2CHMe2), which establishes five of the six stereocenters present in this potent glycosidase inhibitor. The completion of the synthesis requires only four addnl. steps to deliver the final product in 20% overall yield. The conformation and stereochem of the cycloaddn. were discussed.

√L9 ANSWER 46 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Tetrahedron: Asymmetry (2000), 11(1), 1-8

√AB Four new polyhydroxypyrrolizidines, hyacinthacines A1, A2, A3 and B3 (I), were isolated from the bulbs of Muscari armeniacum (Hyacinthaceae) in addition to the known hyacinthacine C1, which was isolated from Hyacinthoides non-scripta (Hyacinthaceae). The structures of hyacinthacines A1, A2, A3 and B3 were identified on the basis of extensive NMR studies as (1S,2R,3R,7aR)-1,2-dihydroxy-3-hydroxymethylpyrrolizidine, (1R,2R,3R,7aR)-1,2-dihydroxy-3-hydroxymethylpyrrolizidine, (1R,2R,3R,5R,7aR)-1,2-dihydroxy-3-hydroxymethyl-5-methylpyrrolizidine and (1S,2R,3R,5R,7R,7aR)-3-hydroxymethyl-5-methyl-1,2,7-trihydroxypyrrolizidine, resp., or the corresponding enantiomers. The inhibitory activities of these new hyacinthacines against a variety of glycosidases are described.

L9 ANSWER 47 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

IN Momose, Yasunori

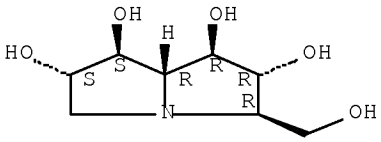
PA Japan

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000072770	A	20000307	JP 1998-245307	19980831
PRAI	JP 1998-245307		19980831		

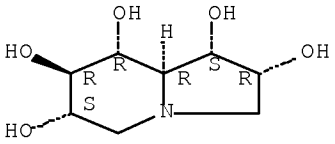
AB (-)-(1S,2R,6S,7R,8R,8aR)-1,2,6,7,8-pentahydroxyindolizidine (I) and (+)-(1S,2R,5R,7R,8S,8aS)-1,2,5,7,8-pentahydroxyindolizidine (II) contained in E. uniflora are claimed. Also claimed are α-glucosidase inhibitors containing exts. or powder of E. uniflora, useful for treatment of diabetes, obesity, etc. The exts. may contain ≥1 selected from I, II, and (+)-(3α,4α,5β)-1-methylpiperidine-3,4,5-triol (III). Isolation of I, II, and III from a hot water extract of E. uniflora and their maltase-inhibiting and sucrase-inhibiting activities were shown. The hot water extract (spray-dried powder) was orally administered to mice together with sucrose to significantly suppressed the increase in blood glucose. Pharmaceutical prepns. containing the exts. were also formulated.

RN 159440-57-0 CAPLUS

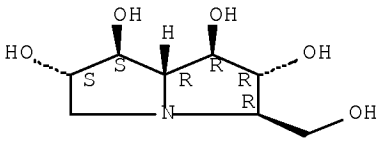
CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



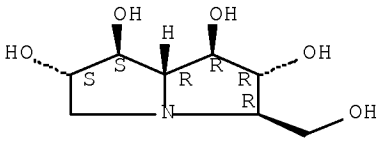
RN 260247-75-4 CAPLUS
CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6R,7S,7aR)- (CA INDEX NAME)



√L9 ANSWER 48 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Phytochemical Analysis (1999), 10(5), 259-263
√AB Direct MS anal., utilizing first-order MS and subsequent MS2 and MS3 product ion analyses, is shown to provide a rapid means of characterizing polyhydroxyalkaloid glycosides and aglycons in aqueous methanol plant exts. that have been crudely purified on ion exchange resin. Anal. of species known to synthesize polyhydroxyalkaloids resulted in the discovery of the first diglycosides of these compds. These were detected in Omphalea diandra and Syzygium oleosum. A monoglycoside was also detected as a minor component in Castanospermum australe.
CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



√L9 ANSWER 49 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN
SO Organic Letters (1999), 1(8), 1311-1314
√AB The first synthesis of (+)-casuarine (I), a pentahydroxy pyrrolizidine alkaloid, is described. The key bond-forming events occur in a tandem [4 + 2]/[3 + 2] nitroalkene cycloaddn. involving nitroalkene ((E)-O2NCH=CHOCOPh), chiral vinyl ether (II), and vinyl silane (Z)-PhMe2SiCH=CHCOCH2OCOPh. This process also creates five of the six stereocenters present in this potent glycosidase inhibitor. Completion of the synthesis required only four addnl. steps and delivered (+)-casuarine in 20% overall yield.
RN 159440-57-0 CAPLUS
CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



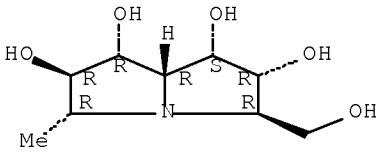
L9 ANSWER 50 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Carbohydrate Research (1999), 316(1-4), 95-103

AB Aqueous ethanol exts. from the immature fruits and stalks of bluebell (Hyacinthoides non-scripta) were subjected to various ion-exchange column chromatog. steps to give 1,4-dideoxy-1,4-imino-D-arabinitol (I), 2(R),5(R)-bis(hydroxymethyl)-3(R),4(R)-dihydroxypyrrolidine (DMDP) (II), 6-deoxy-6-C-(2,5-dihydroxyhexyl)-DMDP (III), 2,5-dideoxy-2,5-imino-DL-glycero-D-manno-heptitol (homoDMDP) (IV), homoDMDP-7-O-apioside (V), homoDMDP-7-O-β-D-xylopyranoside (VI), (1S*,2R*,3R*,5R*,7aR*)-1,2-dihydroxy-3,5-dihydroxymethylpyrrolizidine (VII), and (1S*,2R*,3R*,5R*,6R*,7R*,7aR*)-3-hydroxymethyl-5-methyl-1,2,6,7- tetrahydroxypyrrolizidine (VIII). Bulbs of Scilla campanulata (Hyacinthaceae) yielded (1S*,2R*,3R*,5S*,7aR*)-1,2-dihydroxy-3,5-dihydroxy- methylpyrrolizidine (IX) in addition to compds. I-VII. Compds. III, VI, VII, VIII, and IX are new natural products. Compound IV is a potent competitive inhibitor with Ki values of 1.5 μM for Caldocellum saccharolyticum β-glucosidase and 2.2 μM for bovine liver β-galactosidase. The 7-O-β-D-xyloside VI was a stronger competitive inhibitor than IV of C. saccharolyticum β-glucosidase and rat intestinal lactase, with Ki values of 0.06 and 0.07 μM, resp., but a weaker inhibitor of bovine liver β-galactosidase. Furthermore, compound IV is also a competitive inhibitor (Ki = 1.8 μM) of porcine kidney trehalase, but 6 was inactive against this enzyme.

RN 240117-30-0 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-5-methyl-, (1S,2R,3R,5R,6R,7R,7aR)-rel-(+)- (CA INDEX NAME)



√L9 ANSWER 51 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Tetrahedron: Asymmetry (1998), 9(14), 2549-2558

√AB The NMR spectra of a number of naturally occurring alexines (tetrahydroxylated pyrrolizidine alkaloids) are analyzed and the consequences of changes in the configuration on the conformation of these bicyclic systems discussed. Unambiguous syntheses of australine (7-epi-alexine) and of 7,7a-epi-alexine have now unequivocally established the structures of two natural products isolated from Castanospermum australe which were insecure due to erroneous NMR data. Chemical shift parameters are unreliable as a method of comparing different samples of identical compds.; however, 1H-1H three bond coupling consts. (3JHH) provide easy direct comparison between samples and allow assignments of both the relative configurations for the ring protons and the conformation of the pyrrolizidine framework.

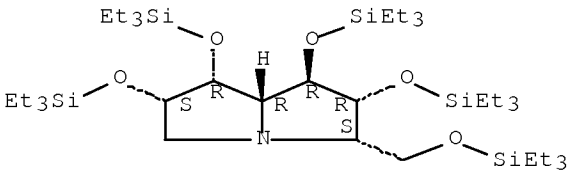
√L9 ANSWER 52 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Tetrahedron Letters (1997), 38(33), 5869-5872

√AB The key step in the synthesis of four diastereomers of casuarine from eight carbon sugar lactones is the efficient reduction of open chain azidodimesylates by sodium hydrogen telluride [Suzuki-Takaoka reduction] to allow the formation of the pyrrolizidine nucleus by bicyclization. This is the first report of the synthesis of such highly oxygenated pyrrolizidines.

RN 194918-17-7 CAPLUS

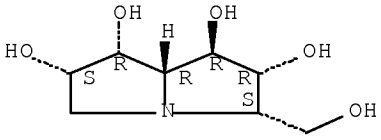
CN 1H-Pyrrolizine, hexahydro-1,2,6,7-tetrakis[(triethylsilyl)oxy]-3-[[(triethylsilyl)oxy]methyl]-, (1R,2R,3S,6S,7R,7aR)- (CA INDEX NAME)



√...

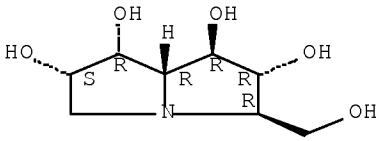
RN 194918-07-5 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3S,6S,7R,7aR)- (CA INDEX NAME)



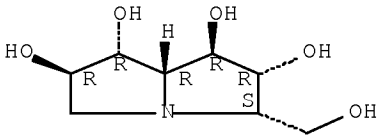
RN 194918-09-7 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7R,7aR)- (CA INDEX NAME)



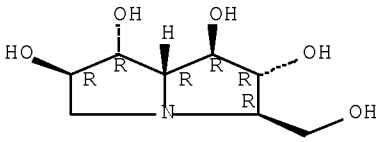
RN 194918-11-1 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3S,6R,7R,7aR)- (CA INDEX NAME)



RN 194918-12-2 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6R,7R,7aR)- (CA INDEX NAME)



L9 ANSWER 53 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Carbohydrate Letters (1996), 2(3), 169-174

AB The isolation, identification and conformational anal. of Casuarine-6-α-D-glucopyranose I from Casuarina equisetifolia L. and Eugenia jambolana Lam. is reported.

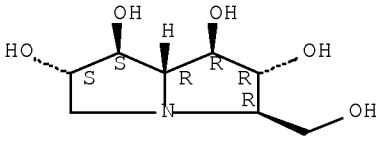
IT 159440-57-0P 186795-20-0P

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)

(isolation of casuarine-6-α-D-glucoside from Casuarina equisetifolia and Eugenia jambolana)

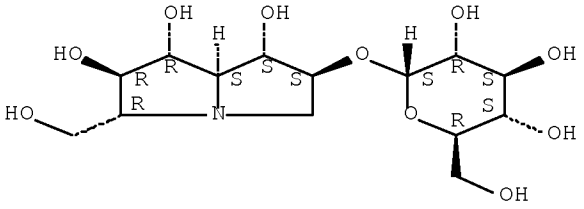
RN 159440-57-0 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



RN 186795-20-0 CAPLUS

CN α-D-Glucopyranoside, (1S,2S,5R,6R,7R,7aS)-hexahydro-1,6,7-trihydroxy-5-(hydroxymethyl)-1H-pyrrolizin-2-yl (CA INDEX NAME)



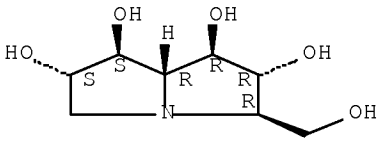
√L9 ANSWER 54 OF 54 CAPLUS COPYRIGHT 2010 ACS on STN

SO Tetrahedron Letters (1994), 35(42), 7849-52

√AB The isolation from Casuarina equisetifolia bark of casuarine [(1R,2R,3R,6S,7S,7aR)-3-(hydroxymethyl)-2,6,7-tetrahydroxypyrrolizidine] is reported.

RN 159440-57-0 CAPLUS

CN 1H-Pyrrolizine-1,2,6,7-tetrol, hexahydro-3-(hydroxymethyl)-, (1R,2R,3R,6S,7S,7aR)- (CA INDEX NAME)



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STN INTERNATIONAL SESSION SUSPENDED AT 19:16:22 ON 09 SEP 2010
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